Ref: 7949

SOUTH AFRICAN CIVIL AVIATION AUTHORITY

ACCIDENT REPORT – EXECUTIVE SUMMARY

Aircraft Registration	**ZS-NAH**	**Date of Accident**	21 April 2005	**Time of Accident**	2100Z
Type of Aircraft	Beech 58	**Type of Operation**	Domestic Charter		
Pilot-in-command Licence Type	Commercial	**Age**	44	**Licence Valid**	Yes
Pilot-in-command Flying Experience	Total Flying Hours	3433.6		Hours on Type	372.7
Last point of departure	FAVG (Virginia Aerodrome)				
Next point of intended landing	FARB (Richards Bay Aerodrome)				

Location of the accident site with reference to easily defined geographical points (GPS readings if possible)

FADN (Durban International Aerodrome)

Meteorological Information	Fine weather conditions prevailed at the time of the accident.				
Number of people on board	1+4	**No. of people injured**	0	**No. of people killed**	0

Synopsis

On 21 April 2005 at 1630Z, the pilot and 4 passengers (3 paying and 1 not paying) took off from FAVG (Virginia Aerodrome) for a domestic charter flight to FARB (Richards Bay Aerodrome).

Once overhead FARB the pilot was unable to extent the landing gear and decided to return to FAVG (Virginia Aerodrome). At FAVG radio contact was established with a maintenance engineer in order to assist the pilot in lowering the landing gear. However, all attempts failed and it was decided to execute a wheels-up landing on the grass surface next to Runway 24 at FADN after the ATC were informed of the intentions of the pilot.

The occupants escaped unharmed from the aircraft but the aircraft sustained substantial damage to both propellers and the flaps and less substantial damage to the lower fuselage.

According to available records the aircraft had a Mandatory Periodic Inspection (MPI) on 15 April 2005 at 4714.4 airframe hours and had accumulated 1.5 hours since the MPI was certified. According to available records all Service Bulletins (SB) and Airworthiness Directives (AD) have been complied with.

The last CAA audit at the AMO was conducted on 19 January 2005. A general comment/recommendation was made by the auditor that the Mass and Balance of the aircraft needed to be updated. The latter was not complied with yet at the time of the accident.

Emergency procedures:
During the emergency the pilot followed the correct emergency procedures as prescribed in the POH (Pilot Operating Handbook).

Investigation revealed that the landing gear motor overheated causing it to fail when lowering the landing gear and in addition the extension handle of the emergency wind-down mechanism was incorrectly mounted. It was also established that the floor panel below this mechanism is not mounted when retraction tests are done following / during an MPI.

Probable Cause

The landing gear motor overheated as a result of the dynamic brake which failed. The latter resulted in the landing gear failing to extend.

The extension handle of the emergency wind-down mechanism was incorrectly mounted. The latter resulted in the pilot being unable to lower the landing gear when attempting to utilise the emergency system.

Contributing to this accident is the fact that the floor panel below the emergency wind-down mechanism is not mounted when retraction tests are done following / during an MPI. The result was that the incorrectly mounted extension went unnoticed during several Mandatory Periodic Inspections.